

Appln No. 09/825,903
Amdt date June 16, 2005
Reply to Office action of April 22, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A method of determining a start of a transmitted frame at a receiver on a frame-based communications network, the method comprising:

providing a preamble format for the transmitted frame wherein a plurality of identical copies of a preamble symbol sequence are transmitted sequentially;

filtering a received transmitted frame using filter coefficients matched to the preamble symbol sequence to provide a correlation sequence;

computing a squared-magnitude of the correlation sequence;

low-pass filtering the squared-magnitude of the correlation sequence to provide a low-pass filtered correlation signal;

delaying the low-pass filtered correlation signal to provide a delayed low-pass filtered correlation signal;

comparing the delayed low-pass filtered correlation signal with the low-pass filtered correlation signal to provide a correlation difference indicator;

comparing the correlation difference indicator with a first fixed predetermined threshold to provide a threshold compared correlation difference indicator;

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detecting energy of the received transmitted frame and low-pass filtering the energy to provide a low-pass filtered energy signal;

comparing the low-pass filtered correlation signal with the low-pass filtered energy signal to provide a correlation peak indicator;

comparing the correlation peak indicator with a second fixed predetermined threshold to provide a threshold compared correlation peak indicator; and

forming a logical-AND of the threshold compared correlation difference indicator and the threshold compared correlation peak indicator to determine a match/no match comparison indicative of the start of a transmitted frame.

2. (Currently amended) The method of Claim 1, wherein the low-pass filtering includes ~~filtering the received transmitted frame using filter coefficients matched to the preamble symbol sequence to provide a correlation sequence and averaging a squared-magnitude of the correlation sequence.~~

3. (Previously presented) The method of Claim 2, wherein the filtering is linear matched filtering.

4. (Previously presented) The method of Claim 2, wherein the filter coefficients are a time-reversed complex-conjugated repeated preamble symbol sequence.

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5. (Previously presented) The method of Claim 4, wherein the time-reversed complex-conjugated repeated preamble symbol sequence is a constant-amplitude zero-autocorrelation sequence.

6. (Original) The method of Claim 4, wherein the time-reversed complex-conjugated repeated preamble symbol sequence includes complex symbols drawn from a Quadrature Phase Shift Keying or 4-Quadrature Amplitude Modulation constellation.

7. (Previously presented) The method of Claim 4, wherein the time-reversed complex-conjugated repeated preamble symbol sequence includes 16 symbols repeated at least 3 times with every 4-symbol sub-sequence having a constant amplitude, zero autocorrelation.

8. Cancelled.

9. Cancelled.

10. Cancelled.

11. Cancelled.

12. Cancelled.

13. Cancelled.

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Amendments to the Drawings:

The attached sheets of drawings includes changes to Fig. 57. These sheets, which include Fig. 57, replace the original sheet including Fig. 57.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes